

Amendments to the Claims:

1.-8. (canceled)

9. (currently amended) A diagnostic system for a check valve of a positive displacement pump having a solid-borne sound sensor, comprising:

a calculating device configured to calculate a first operative sound level of a first operative sound signal recorded in a closed state of a ~~the~~ valve induced during operation of the pump and to calculate a second operative sound level of a second value of a second operative sound signal recorded in an open state of the valve induced during operation of the pump, wherein a first sound value is determined based on a last sound signal recorded in the closed state and a second value is determined based on a last sound signal recorded in the open state;

an evaluation device ~~for configured to determining~~determine ~~the a~~ valve state of the valve; and

a signal output for displaying ~~the a~~ fault if the deviation of the first sound level determined for the closed state of the valve ~~from~~ the second sound level determined for the open state of the valve exceeds a pre-determinable threshold value.

10. (currently amended) The diagnostic system in accordance with claim 10~~9~~, wherein the first value is determined based on a last sound signal recorded in the closed state and the second value is determined based on a last sound signal recorded in the open state.

11. (previously presented) The diagnostic system in accordance with claim 10, wherein the valve is a check valve of the positive displacement pump.

12. (previously presented) The diagnostic system in accordance with claim 11, wherein the evaluation device determines the valve state based on the first sound signal recorded and/or the second sound signal recorded.

13.-20. (canceled)